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CASE D0323 NP

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Stephen C. D'Amico

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

IN RE APPLICATION OF

RAMANATHAN ET AL.

APPLICATION NO: 10/800,249

FILED: MARCH 12, 2004

FOR: POLYNUCLEOTIDE ENCODING A NOVEL HUMAN G-PROTEIN  
COUPLED RECEPTOR VARIANT OF HM74, HGPRBMY74

Mail Stop Amendment  
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SUPPLEMENTAL INFORMATION DISCLOSURE STATEMENT

Sir:

Applicants believe this paper is being filed before the mailing date of a first Office Action on the merits, and so under 37 C.F.R. §1.97(b)(3) no fees are required. If a fee is deemed to be required, the Commissioner is hereby authorized to charge such fee to Deposit Account No. 19-3880.


In accordance with 37 C.F.R. §1.56, applicants wish to call the Examiner's attention to the references cited on the attached form(s) PTO-1449.

Copies of these references are enclosed herewith.

The Examiner is requested to consider the foregoing information in relation to this application and indicate that each reference was considered by returning a copy of the initialed PTO 1449 form(s).

Respectfully submitted,

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Stephen C. D'Amico  
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Date: 11-11-04

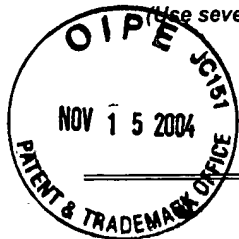
FORM PTO-1449  
(REV. 7-85)U.S. DEPARTMENT OF COMMERCE  
PATENT AND TRADEMARK OFFICE

## INFORMATION DISCLOSURE CITATION

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(Use several sheets if necessary)



## U.S. PATENT APPLICATION PUBLICATIONS

EXAMINER INITIAL		U.S. APPLICATION DOCUMENT	DATE OF PUBLICATION	NAME	CLASS	SUBCLASS	FILING DATE
	AA	2002/0187514	12/12/02	Chen et al.			
	AB	2004/0038201	2/26/04	Nau et al.			
	AC	2004/0092520	5/13/04	Griffith			
	AD	2004/0117125	6/17/04	Chen et al.			
	AE	2004/0122074	6/24/04	Dow et al.			
	AF	2004/0142377	7/22/04	Unett et al.			

## U.S. PATENT DOCUMENTS

		DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE
	AG	6,555,339	4/29/03	Liaw et al.			
	AH						
	AI						
	AJ						

## FOREIGN PATENT DOCUMENTS

		DOCUMENT NUMBER	DATE	OFFICE	CLASS	SUBCLASS	TRANSLATION	
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	AK	JP 2004-198202	7/15/04	JP			<input type="checkbox"/>	<input type="checkbox"/>
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	AM	WO 2004/037823	5/6/04	PCT			<input type="checkbox"/>	<input type="checkbox"/>
	AN	WO 2004/016608	2/26/04	PCT			<input type="checkbox"/>	<input type="checkbox"/>
	AO	WO 2004/039320	5/13/04	PCT			<input type="checkbox"/>	<input type="checkbox"/>

## OTHER DOCUMENTS (Including Author, Title, Date, Pertinent pages, Etc.)

	AP	NCBI Entrez Accession No. BC063461 (gi:39645840), Strausberg, R.L. et al., April 1, 2004
	AQ	AbdAlla, S. et al., "AT <sub>1</sub> -receptor heterodimers show enhanced G-protein activation and altered receptor sequestration", Nature, Vol. 407, pp. 94-98 (2000)
	AR	Alam, J. et al., "Reporter Genes: Application to the Study of Mammalian Gene Transcription", Analytical Biochemistry, Vol. 188, pp. 245-254 (1990)

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	2AL	WO 2004/072648	8/26/04	PCT			<input type="checkbox"/>	<input type="checkbox"/>
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3AA	Altschul, S.F. et al., "Gapped BLAST and PSI-BLAST: a new generation of protein database search programs", Nucleic Acids Research, Vol. 25, No. 17, pp. 3389-3402 (1997)
3AB	Baldwin, J.M., "Structure and function of receptors coupled to G proteins", Current Opinion in Cell Biology, Vol. 6, pp. 180-190 (1994)
3AC	Bateman, A. et al., "The Pfam Protein Families Database", Nucleic Acids Research, Vol. 28, No. 1, pp. 263-266 (2000)
3AD	Baud, V. et al., "EMR1, an Unusual Member in the Family of Hormone Receptors with Seven Transmembrane Segments", Genomics, Vol. 26, pp. 334-344 (1995)
3AE	Blache, P. et al., "Cloning and Tissue Distribution of a New Rat Olfactory Receptor-like (OL2)", Biochemical and Biophysical Research Communications, Vol. 242, No. 3, pp. 669-672 (1998)
3AF	Bolander, F.F., Molecular Endocrinology, Second Edition, Academic Press, Inc., publ., pp. 162-176 (1994)
3AG	Boss, V. et al., "Induction of NFAT-mediated Transcription of G <sub>q</sub> -coupled Receptors in Lymphoid and Non-lymphoid Cells", The Journal of Biological Chemistry, Vol. 271, No. 18, pp. 10429-10432 (1996)
3AH	Chen, G. et al., "Constitutive receptor systems for drug discovery", Journal of Pharmacological and Toxicological Methods, Vol. 42, pp. 199-206 (1999)
3AI	Chiquet-Ehrismann, R. et al., "Tenascin: an Extracellular Matrix Protein Involved in Tissue Interactions during Fetal Development and Oncogenesis", Cell, Vol. 47, pp. 131-139 (1986)
3AJ	Conklin, B.R. et al., "Substitution of three amino acids switches receptor specificity of G <sub>q</sub> α to that of G <sub>i</sub> α", Nature, Vol. 363, pp. 274-276 (1993)
3AK	Coughlin, S.R., "Expanding horizons for receptors coupled to G proteins: diversity and disease", Current Opinion in Cell Biology, Vol. 6, pp. 191-197 (1994)
3AL	Dorn II, G.W. et al., "Low- and high-level transgenic expression of β <sub>2</sub> -adrenergic receptors differentially affect cardiac hypertrophy and function in Gα <sub>q</sub> -overexpressing mice", Proc. Natl. Acad. Sci. USA, Vol. 96, pp. 6400-6405 (1999)
3AM	Feng, Y. et al., "HIV-1 Entry Cofactor: Functional cDNA Cloning of a Seven-Transmembrane, G Protein-Coupled Receptor", Science, Vol. 272, pp. 872-877 (1996)
3AN	Fiering, S. et al., "Single cell assay of a transcription factor reveals a threshold in transcription activated by signals emanating from the T-cell antigen receptor", Genes and Development, Vol. 4, pp. 1823-1834 (1990)

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**OTHER DOCUMENTS** (Including Author, Title, Date, Pertinent pages, Etc.)

4AA	Gaudin, P. et al., "Constitutive Activation of the Human Vasoactive Intestinal Peptide 1 Receptor, a Member of the New Class II Family of G Protein-coupled Receptors", The Journal of Biological Chemistry, Vol. 273, No. 9, pp. 4990-4996 (1998)
4AB	George, S.E. et al., "Functional Coupling of Endogenous Serotonin (5-HT <sub>1B</sub> ) and Calcitonin (C1a) Receptors in CHO Cells to a Cyclic AMP-Responsive Luciferase Reporter Gene", Journal of Neurochemistry, Vol. 69, No. 3, pp. 1278-1285 (1997)
4AC	Gilman, A.G., "G Proteins: Transducers of Receptor-Generated Signals", Ann. Rev. Biochem., Vol. 56, pp. 615-649 (1987)
4AD	Gray, J.X. et al., "CD97 is a Processed, Seven-Transmembrane, Heterodimeric Receptor Associated with Inflammation", The Journal of Immunology, Vol. 157, pp. 5438-5447 (1996)
4AE	Hawes, B.E. et al., "Phosphatidylinositol 3-Kinase Is an Early Intermediate in the G $\beta\gamma$ -mediated Mitogen-activated Protein Kinase Signaling Pathway", The Journal of Biological Chemistry, Vol. 271, No. 21, pp. 12133-12136 (1996)
4AF	Hofmann, K. et al., MF C-35: "A Database of Membrane Spanning Protein Segments", Biol. Chem. Hoppe-Seyler, Vol. 374, p. 166 (1993)
4AG	Horn, F. et al., "G protein-coupled receptors <i>in silico</i> ", J. Mol. Med., Vol. 76, pp. 464-468 (1998)
4AH	Horn, F. et al., "The Interaction of Class B G Protein-Coupled Receptors with their Hormones", Receptors and Channels, Vol. 5, pp. 305-314 (1998)
4AI	Karpe, F. et al., "The nicotinic acid receptor — a new mechanism for an old drug", Lancet, Vol. 363, pp. 1892-1894 (2004)
4AJ	Karttunen, J. et al., "Measurement of ligand-induced activation in single viable T cells using the <i>lacZ</i> reporter gene", Proc. Natl. Acad. Sci. USA, Vol. 88, pp. 3972-3976 (1991)
4AK	Kim, J.-M. et al., "Structure and function in rhodopsin: Rhodopsin mutants with a neutral amino acid at E134 have a partially activated conformation in the dark state", Proc. Natl. Acad. Sci. USA, Vol. 94, pp. 14273-14278 (1997)
4AL	Kypson, A.P. et al., "Adenovirus-mediated gene transfer of the $\beta_2$ -adrenergic receptor to donor hearts enhances cardiac function", Gene Therapy, Vol. 6, pp. 1298-1304 (1999)
4AM	Lu, Z.-L. et al., "The Functional Topography of Transmembrane Domain 3 of the M <sub>1</sub> Muscarinic Acetylcholine Receptor, Revealed by Scanning Mutagenesis", The Journal of Biological Chemistry, Vol. 274, No. 11, pp. 7309-7315 (1999)
4AN	Maniatis, T. et al., Molecular Cloning, A Laboratory Manual, Cold Spring Harbor Laboratory, publ., pp. v-x (table of contents) (1982)

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5AA	Matsuoka, I. et al., "Identification of Novel Members of G-Protein Coupled Receptor Superfamily Expressed in Bovine Taste Tissue", Biochemical and Biophysical Research Communications, Vol. 194, No. 1, pp. 504-511 (1993)
5AB	Okada, T. et al., "Activation of rhodopsin: new insights from structural and biochemical studies", Trends in Biochemical Sciences, Vol. 26, No. 5, pp. 318-324 (2001)
5AC	Parma, J. et al., "Somatic mutations in the thyrotropin receptor gene cause hyperfunctioning thyroid adenomas", Nature, Vol. 365, pp. 649-651 (1993)
5AD	Raming, K. et al., "Identification of a Novel G-Protein Coupled Receptor Expressed in Distinct Brain Regions and a Defined Olfactory Zone", Receptors and Channels, Vol. 6, pp. 141-151 (1998)
5AE	Rees, S. et al., Chapter 8: "Reporter gene systems for the study of G protein-coupled receptor signal transduction in mammalian cells", Signal Transduction: A Practical Approach, Second Edition, Oxford University Press, publ., Milligan, G., ed., pp. 171-221 (1999)
5AF	Salcedo, R. et al., "Human endothelial cells express CCR2 and respond to MCP-1: direct role of MCP-1 in angiogenesis and tumor progression", Blood, Vol. 96, No. 1, pp. 34-40 (2000)
5AG	Selbie, L.A. et al., "G protein-coupled-receptor cross-talk: the fine-tuning of multiple receptor-signalling pathways", Trends in Pharmacological Sciences, Vol. 19, pp. 87-93 (1998)
5AH	Sica, A. et al., "Defective Expression of the Monocyte Chemotactic Protein-1 Receptor CCR2 in Macrophages Associated with Human Ovarian Carcinoma", The Journal of Immunology, Vol. 164, pp. 733-738 (2000)
5AI	Strosberg, A.D., "Structure/function relationship of proteins belonging to the family of receptors coupled to GTP-binding proteins", Eur. J. Biochem., Vol. 196, pp. 1-10 (1991)
5AJ	Suto, C.M. et al., "Selection of an Optimal Reporter Gene for Cell-Based High Throughput Screening Assays", Journal of Biomolecular Screening, Vol. 2, No. 1, pp. 7-9 (1997)
5AK	Tao, Y.-X. et al., "Constitutive Activation of G Protein-Coupled Receptors as a Result of Selective Substitution of a Conserved Leucine Residue in Transmembrane Helix III", Molecular Endocrinology, Vol. 14, No. 8, pp. 1272-1282 (2000)
5AL	Thomas, M.B. et al., "Chemoreceptors expressed in taste, olfactory and male reproductive tissues", Gene, Vol. 178, pp. 1-5 (1996)
5AM	Watson, S. et al., "Introduction: Seven Transmembrane Proteins", The G-Protein Linked Receptor FactsBook, Academic Press Limited, publ., pp. 2-6 (1994)
5AN	Wess, J., "G-protein-coupled receptors: molecular mechanisms involved in receptor activation and selectivity of G-protein recognition", The FASEB Journal, Vol. 11, pp. 346-354 (1997)

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6AA	Whitney, M. et al., "A genome-wide functional assay of signal transduction in living mammalian cells", Nature Biotechnology, Vol. 16, pp. 1329-1333 (1998)
6AB	Xing, H. et al., "A Fluorescent Reporter Assay for the Detection of Ligands Acting Through G <sub>i</sub> Protein-Coupled Receptors", J. of Receptor & Signal Transduction Research, Vol. 20, No. 4, pp. 189-210 (2000)
6AC	Yuan, T.T.-T. et al., "Cloning and genetic characterization of an evolutionarily conserved human olfactory receptor that is differentially expressed across species", Gene, Vol. 278, pp. 41-51 (2001)
6AD	Zlokarnik, G. et al., "Quantitation of Transcription and Clonal Selection of Single Living Cells with $\beta$ -Lactamase as Reporter", Science, Vol. 279, pp. 84-88 (1998)
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